ABSTRACT OF THE DISCLOSURE

A gas stream containing at least one fluorine compound selected from the group consisting of compounds of carbon and fluorine, compounds of carbon, hydrogen and fluorine, compounds of sulfur and fluorine, compounds of nitrogen and fluorine and compounds of carbon, hydrogen, oxygen and fluorine is contacted with a catalyst comprising at least one of alumina, titania, zirconia and silica, preferably a catalyst comprising alumina and at least one of nickel oxide, zinc oxide and titania in the presence of steam, thereby hydrolyzing the fluorine compound at a relatively low temperature, e.g. 200° - 800°C, to convert the fluorine of the fluorine compound to hydrogen fluoride.